

THE PERIANTH OF RYNCHOSPORA CAPILLACEA VAR. LEVISETA.

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IN RHODORA for July, 1906, p. 130, there is a statement in Prof. Fernald's article on some *Cyperaceae* that does not agree with my experience with *Rynchospora capillacea* var. *leviseta*. Mentioning *Cyperaceae* without bristles it states: "In a few regions, the Kennebec Valley, Maine, Lake County, Indiana, etc., *Rynchospora capillacea* consistently lacks the perianth and is var. *leviseta* Hill." Reference is also made to a previous article in RHODORA iii. 250 (1901), where the statement occurs: "In *Rynchospora capillacea* var. *leviseta* the reduced bristles lack the barbellate character found in otherwise undistinguishable spikes." Never having noticed this lack, or reduction of perianth I was a little surprised. Although I had examined a great many specimens at various times in order if possible to find some with barbed bristles, the absence or reduction of the perianth had never been remarked in plants collected about Lake Michigan. To see if I had overlooked the matter, after reading the article I went over my collections, taking various spikelets from different sheets to see how they fared in this respect. They had been carefully scrutinized at the time of collecting for smoothness of bristles.

My collections from Lake County, Ind., are six, three from Pine, the original locality, made in 1875, 1876 and 1880; two from Whiting, made in 1880 and 1881, and one from Edgemoor, 1881. The area it frequents here has not proved to be large, the extremes about six miles apart. North of Chicago, in Lake County, Ill., I have made three collections, two at Wauconda, made in 1898 and 1903, and one from Waukegan, 1905. I have a single plant found with the barbellate form at Brownstown on Grand Traverse Bay, Michigan. All the stations are less than a mile from Lake Michigan except Wauconda about seventeen miles west of Waukegan, where the plant grows by Bangs Lake, which is tributary to Fox River, and therefore in the basin of the Mississippi. These comprise all the stations where I have seen it. They mostly show myriads of examples, since the plants usually grow in dense masses. But in those which lie west of Lake Michigan I have not yet found a case with barbed bristles. Having

found one of the smooth bristled forms among the barbed at Brownstown naturally led to expect the reverse, which may yet be the case. The plants kept for the herbarium by no means comprise all cases of examination, since I have been frequently over ground where some of them grow and have tested them for the purpose of discerning any change in character. I have also collected or examined the barbellate form from three localities in Michigan, all contiguous to Lake Michigan; Peteskey and Brownstown in 1878, and Benton Harbor, 1895. Both the typical form and the variety occur in other parts of the state, as recorded in Beal's Michigan Flora.

What now do these collections show with regard to the lack of perianth or its reduction. There are generally from 2 to 6 akenes in a spikelet, mostly 4 or 5. I have met with but one akene without a perianth, and that in a spikelet where the rest were provided with one. The number of bristles when counted was so uniformly six that I ceased at length counting in all cases, but noted the length in both smooth and barbellate forms. The length is apt to vary in the same akene, the difference being covered by the length of the tubercle, a bristle rarely falling short of its base or exceeding its tip. Nor could I discern any difference in this respect in the two forms. The arrest of development was limited to the barbs. Though I am necessarily confined to my herbarium for the data regarding the number and length of bristles, it does not follow with respect to their absence, since in cases examined and not preserved the lack of a perianth would have been noticed, as it would have removed the crucial test for the variety.

Perhaps so small a matter hardly deserved so full a treatment, but it has a taxonomic value on the constancy of a varietal character, more so than many by which species are delimited. The specimens taken in different years from the same locality and from the various localities themselves prove this for the plants as they occur about the head of Lake Michigan. For the thirty years it has been under observation it comes true to seed, whatever may be its variations elsewhere.

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